

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A valve connector for coupling with inflation valves of vehicle ~~tyres~~ tires, comprising

- a housing,
- within the housing a coupling hole for coupling with an inflation valve, the coupling hole having a central axis and an outer opening,

- ~~- positioning means for positioning the inflation valve when coupled in the coupling hole,~~
- and - an activating pin, which is arranged coaxially with the coupling hole, for depressing a central spring-force operated core pin of the inflation valve,

- ~~- a cylinder having a cylinder wall provided with a pressure port which is connected to a pressure source, wherein~~

- the activating pin is shiftable between a proximal pin position and a distal pin position ~~relative to the positioning means~~ so as to depress the core pin of the inflation valve in its distal pin position and disengage the core pin of the inflation valve in its proximal pin position ~~when the inflation valve is positioned by the positioning means,~~

- the activating pin is coupled with a piston and the piston is slidably arranged in the cylinder and is movable between a proximal piston position, which corresponds to the proximal pin position, and a distal piston position, which corresponds to the distal pin position, ~~characterized by the fact that wherein~~

- the piston is disposed ~~in the cylinder~~ between the pressure port and the coupling hole and is drivable from its proximal piston position to its distal piston position by the pressure ~~supplied into the cylinder~~ from the pressure source, and

- a flow path through the piston and through at least a portion of the activating pin, wherein piston motion to the proximal piston position blocks said flow path and piston motion to said distal position opens said flow path.

- ~~- that flow regulating means are provided for selectively interrupting or freeing a flow path between the pressure source and the coupling hole depending on the piston positions and are adapted such that the flow path is interrupted in the proximal piston position and the flow path is~~

~~freed in the distal piston position at least when the inflation valve is positioned by the positioning means.~~

2. (Currently Amended) Valve connector according to claim 1, ~~characterized by the fact that wherein~~ the flow regulating means are further adapted such that the flow path is interrupted between said proximal and distal piston positions in third piston positions which correspond to intermediate pin positions in which the core pin is engaged by said activating pin.

3. (Currently Amended) Valve connector according to claim 1, ~~characterized by the fact that comprising~~ at least one seal positioned between

~~—said flow regulating means comprise sealing means and said sealing means comprise means for sealing the edge of said piston against the~~ and a cylinder formed by an inner wall of said eylinder housing when the piston is in its proximal piston position respectively in its proximal and third piston positions.

4. (Currently Amended) Valve connector according to claim 3, ~~characterized by the fact that wherein~~ the piston is movable further beyond said proximal piston position into a fourth piston position in which the piston is farther away from the outer opening of the coupling hole than in the proximal piston position and the inner wall of said eylinder housing comprises ~~channeling means for a channel~~ enabling the conduction of compressed air past the edge of said piston when said piston is in its fourth piston position.

5. (Currently Amended) Valve connector according to claim 3 ~~characterized by the fact that wherein~~ the housing comprises a piston control means for guiding the movement of said piston and of the activating pin in the direction of the central axis of the coupling hole.

6. (Currently Amended) Valve connector according to claim 3, ~~characterized by the fact that wherein~~ the housing comprises said a cylinder wall for guiding the movement of said piston and the activating pin in the direction of the central axis of the coupling hole.

7. (Currently Amended) Valve connector according to claim 5, ~~characterized by the fact that~~ comprising at least one additional seal ~~said sealing means comprise means~~ located to seal ~~for sealing~~ the outer surface of the activating pin against the surface of said piston control means.

8. (Currently Amended) Valve connector according to claim 4, ~~characterized by the fact that~~ wherein

the activating pin comprises a duct ~~means for~~ enabling the conduction of compressed air past the activating pin ~~between the activating pin and the piston control means~~ when said piston is in its fourth piston position.

9. (Currently Amended) Valve connector according to claim 3, ~~characterized by the fact that~~ wherein the activating pin is coupled with the piston through a piston rod and said flow path comprises a channel through the piston and piston rod that connects the cylinder to an orifice on the surface of said piston rod, wherein the mutual positioning of said orifice and said ~~sealing means~~ seal is such that

- said orifice is closer to the coupling hole than said ~~sealing means~~ seal when said piston is in its distal piston position thereby freeing the flow path through said channel between said cylinder and the coupling hole when said piston is in said distal piston position and

- said ~~sealing means are~~ seal is closer to the coupling hole than said orifice when said piston is in its proximal piston position thereby interrupting said flow path through said channel between said cylinder and the coupling hole when said piston is in said distal piston position and in said third piston positions.

10. (Currently Amended) Valve connector according to claim 1, ~~characterized by the fact that~~ ~~the flow regulating means comprises~~ comprising a valve element mounted centrally within said piston and being axially movable in relation to said piston between a closed valve position and an open valve position.

11. (Currently Amended) Valve connector according to claim 10, ~~characterized by the fact that wherein~~ said valve ~~element~~ is pulled by an extension spring towards said closed valve position and comprises a valve lever extending eccentrically through said piston for pushing said valve ~~element~~ towards said open valve position when said piston is in said distal position.

12. (Currently Amended) Valve connector according to claim 10, ~~characterized by the fact that that wherein~~ the activating pin is coupled with the piston through a piston rod and said valve ~~element~~ comprises

- a central pin extending concentrically through said piston and piston rod and
- a compression spring for pushing said valve ~~element~~ towards said closed valve position.

13. (Currently Amended) Valve connector according to claim 1 ~~where wherein the housing has one coupling hole and within the coupling hole inflation valve sealing means for sealing the valve connector onto inflation valves of various types and/or sizes, characterized by the fact that~~

- said coupling hole includes at least two coupling hole sections which are axially displaced from each other and have different diameters, with the larger diameter coupling hole section closer to said outer opening than the smaller diameter hole section, and

- ~~said inflation valve sealing means comprise~~ a first sealing portion and a second sealing portion situated coaxially with the center axis of the coupling hole at different levels along the center axis, with said first sealing portion disposed at and assigned to the larger coupling hole section and said second sealing portion disposed at and assigned to the smaller coupling hole section.

14. (Currently Amended) Valve connector according to claim 13 ~~characterized by the fact that it comprises~~ comprising:

- a lever arm that is movable between a rest position and an activation position (83), and
- within the coupling hole a deformable bushing;

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wherein said deformable bushing is arranged to be influenced by the movement of said lever arm so that it becomes deformed when said lever arm is in said activation position and not deformed when said lever arm is in said rest position, the deformed state corresponding to the formation of temporary securing thread onto the surface of said deformable bushing when the inflation valve is coupled in the coupling hole.

15. (Currently Amended) A pump for human-powered operation by hand or foot for inflating a vehicle tire tyre, ~~characterized by the fact that it comprises attached thereto~~ said pump comprising a valve connector according to claim 1.

16. (Cancelled)